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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/731,093	12/10/2003	Yong Cheol Park	0465-1109P	4509

2292 7590 09/26/2006

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EXAMINER

GUPTA, PARUL H

ART UNIT	PAPER NUMBER
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2627

DATE MAILED: 09/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/731,093	Applicant(s) PARK ET AL.	
	Examiner Parul Gupta	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-17 are pending for examination as interpreted by the examiner. The IDS filed on 10/18/04 was considered.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. With respect to claims 1, 6, 7, and 10, the omitted steps are: writing the replacement-recording data to the disc. Examiner suggests inserting the word "writing" immediately before "replacement-recording data" after the preamble in claims 1, 6, 7, and 10 and in claims 1 and 6, line 5, change "from" to --in--.

Double Patenting

3. Claim 17 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 20 of U.S. Patent Publication No. 2004/0120233. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the reasons stated below.

Claim 17 recites "an apparatus for recording/reproducing a write-once optical disc, comprising: a controller for transferring a recording command for requesting recording on a specified area of the disc; and a recording device for judging whether the specified area is an already recorded area or a non-recorded area, and if it is judged

that the specified area is the already recorded area" which is exactly what is claimed in claim 20 of the patent publication.

It is clear that all the elements of claim 17 are to be found in claim 20. The difference between claim 17 of the application and claim 20 of the patent publication lies in the fact that the patent application claim includes details of recording management information on the disc. However, this is necessary to ensure continuity of the user data. Thus, it would be obvious to record management information on the disc in order to perform the function of ensuring continuity of the user data area can be secured even after the replacement-recoding operation; therefore, claim 17 is not patentably distinct from claim 20.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claims 1-3, 6-9, and 13-17 are rejected under 35 U.S.C. 102(a) as being anticipated by Takano et al., US Patent 5,448,728.

Regarding claim 1, Takano et al. discloses a method of managing overwrite on a write-once optical disc (column 1, lines 40-45), comprising: writing replacement-recording data, which is requested to be overwritten in a specified area of the disc where recording is completed (column 1, lines 60-61), from a rear of a user data area of the disc (column 6, lines 2-6); and recording information on a last recordable position of the user data area, which is changed in accordance with the replacement recording

operation (column 6, lines 8-10), in a management area of the disc (column 6, lines 58-63).

Regarding claim 2, Takano et al. discloses the method of claim 1, wherein the last recordable position information of the user data area is obtained by updating information on a previous last recordable position of the user data area (column 6, lines 17-27).

Regarding claim 3, Takano et al. discloses the method of claim 1, wherein the last recordable position information of the user data area is updated as new management information while information on a previous last recordable position of the user data area is maintained (column 7, lines 5-7).

Regarding claim 6, Takano et al. discloses in figure 10B a method of managing overwrite on an optical disc write once (column 1, lines 40-45), comprising: writing replacement-recording data, which is requested to be overwritten in a specified area of the disc where recording is completed (column 1, lines 60-61), in an area preceding an outer spare area (OSA) of the disc ("B AREA"); extending the OSA as large as a size of a replacement-recorded area (column 6, lines 8-10); and recording information on a last recordable position of the user data area, which is changed in accordance with the extension of the OSA, in a management area of the disc (column 6, lines 58-63).

Regarding claim 7, Takano et al. discloses in figure 10B a method of managing overwrite on a write-once optical disc (column 1, lines 40-45), comprising: replacement-recording data, which is requested to be overwritten in a specified area of the disc where recording is completed (column 1, lines 60-61), in an outer spare area (OSA) of the disc ("B AREA"); determining whether to extend the OSA in consideration of a size

of a replacement-recorded area (column 6, lines 8-10); and recording information on a last recordable position of the user data area, which is changed in accordance with the determination of the extension of the OSA, in a management area of the disc (column 6, lines 58-63).

Regarding claim 8, Takano et al. discloses the method of claim 7, wherein whether to extend the OSA is determined before the replacement recording operation. Column 6, lines 8-10 explains that the determination of whether or not to extend the area occurs while judgment is being made of where to write the data, during the updating step, before actually writing the data.

Regarding claim 9, Takano et al. discloses the method of claim 7, wherein whether to extend the OSA is determined during initialization of the disc. Column 6, lines 8-10 explains that the determination of whether or not to extend the area occurs while judgment is being made of where to write the data, during the updating step, before actually writing the data. This is during the initialization or formatting period before writing, even if not the initial formatting of the disc.

Regarding claim 13, Takano et al. discloses a method of managing overwrite on a write-once optical disc (column 1, lines 40-45), comprising: receiving a recording command for requesting recording on a specified area of the disc (from "operator" of column 1, line 43); judging whether the specified area is an already recorded area or a non-recorded area; and if it is judged that the specified area is the already recorded area, replacement-recording data in another area of a user data area so that a continuity of the user data area can be secured even after the replacement-recoding operation. Column 5, lines 64 to column 6, line 10 explains how the data is read to

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memory and recorded next to the last data-written block, which is the same thing as judging the next non-recorded area and writing data there to protect the continuity of the data.

Regarding claim 14, Takano et al. discloses the method of claim 13, wherein the last recordable position information of the user data area, which is changed through the replacement recording, is recorded in a management area of the disc (column 6, lines 58-63).

Regarding claim 15, Takano et al. discloses the method of claim 13, wherein judgment of whether the specified area is the already recorded area or the non-recorded area is performed using latest management information recorded in the disc (column 6, lines 2-10).

Regarding claim 16, Takano et al. discloses the method of claim 15, wherein the management information is an SBM (Space Bit-Map). Column 3, lines 18-26 describe the management table that is used in each embodiment to manage the updated data. A management table is a map of the allocation of space on the recording medium, making it a space bit-map.

Regarding claim 17, Takano et al. discloses in figure 1 an apparatus for recording/reproducing a write-once optical disc, comprising: a controller (11 and 14) for transferring a recording command for requesting recording on a specified area of the disc; and a recording device (operated by element 11) for judging whether the specified area is an already recorded area or a non-recorded area, and if it is judged that the specified area is the already recorded area, replacement-recording data in another area

of a user data area so that a continuity of the user data area can be secured even after the replacement-recoding operation (column 5, lines 64 to column 6, line 10).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4-5 and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takano et al. in view of Miyamoto et al., US Patent 5,867,455.

Takano et al. teaches the limitations of independent claim 1 as set forth above.

Regarding claim 4, Takano et al. further teaches the method of claim 1, wherein the optical disc write once is a type of optical disc write once, to which the method is applied in the same manner. However, Takano et al. does not but Miyamoto et al. teaches that the disc is a dual-layer type disc in column 2, lines 25-26.

Regarding claim 5, Miyamoto et al. further teaches a method, wherein the dual layers have user data areas consecutively given like one recording layer. Column 2, lines 25-42 explain the interaction between the first and third layers that help them operate as one layer. As the second layer is optional, the disc given only has dual layers.

Regarding claim 10, Takano et al. discloses a method of managing overwrite on an optical disc write once (column 1, lines 40-45), comprising: selectively replacement-recording data, which is requested to be overwritten in a specified area of the disc

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where recording is completed (column 1, lines 60-61), in a user data area of the respective recording layer of the disc; and recording information on a last recordable position of the user data area of the respective recording layer, which is changed in accordance with the replacement recording operation, in a management area of the disc (column 6, lines 58-63). However, Takano does not but Miyamoto does teach a disc having a plurality of recording layers in column 2, lines 25-26.

Regarding claim 11, Takano et al. further discloses a method, wherein the last recordable position information of the user data area of the respective recording layer is obtained by updating information on a previous last recordable position of the user data area of the respective recording layer (column 6, lines 17-27).

Regarding claim 12, Takano et al. further discloses a method, wherein the last recordable position information of the user data area of the respective recording layer is updated as new management information while information on a previous last recordable position of the user data area of the respective recording layer is maintained as it is (column 6, lines 58-63).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include the concept of a dual layer disc having user data areas as taught by Miyamoto et al. into the system of Takano et al. The motivation would be to be effective in a read only memory (column 2, lines 38-42 of Miyamoto et al.).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Parul Gupta whose telephone number is 571-272-5260.

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The examiner can normally be reached on Monday through Thursday, from 9:30 AM to 7 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrea Wellington can be reached on 571-272-4483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PHG
9/22/06


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SUPERVISORY PATENT EXAMINER